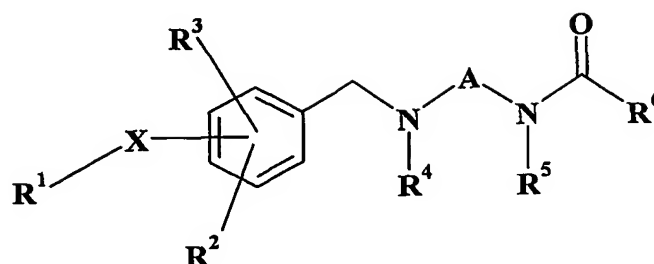


CLAIMS

1. A compound of general formula I



I

wherein

A is a straight or branched C₂-C₈ alkyl chain;

X is a methylene, oxygen, sulphur or a NR⁷ group;

10 R₁ is a straight or branched C₁-C₈ alkyl or C₃-C₈ alkenylene or C₃-C₈ alkynylene chain, optionally substituted with CF₃, phenyl, phenoxy or naphthyl, the aromatic rings optionally substituted by one or more C₁-C₄ alkyl, halogens, trifluoromethyl, hydroxy or C₁-C₄ alkoxy groups;

15 R², R³ are independently hydrogen, a C₁-C₃ alkyl chain, halogen, trifluoromethyl, hydroxy or C₁-C₄ alkoxy groups;

R⁴, R⁵ are independently hydrogen or C₁-C₆ alkyl;

R⁶ is a hydrogen or a straight or branched C₁-C₈ alkyl or linked to R⁵ ~~can form~~ a five to seven membered lactam;

20 R⁷ is hydrogen or C₁-C₆ alkyl;

and the pharmaceutically acceptable salts thereof, with the proviso that when A is -CH₂CH₂-, R¹-X is ortho-benzylthio, R², R³ and R⁵ are hydrogen and R⁶ methyl, R⁴ is other than hydrogen or methyl;

25 when A is -CH₂CH₂-, R¹-X 4-methoxy, R² 2-methoxy, R³ and R⁵ hydrogen and R⁶ methyl, R⁴ is other than hydrogen, and

when A is $-\text{CH}_2\text{CH}_2-$, R^1 -X 3-methoxy, R^2 5-methoxy, R^3 and R^5 hydrogen and R^6 methyl, R^4 is other than hydrogen.

2. A compound of general formula I as defined in claim 1, where A is ethylene or propylene, X is oxygen, methylene, NH or NCH_3 , R^1 is C_1 - C_8 alkyl chain, optionally substituted with CF_3 , phenyl or phenoxy group, where the aromatic ring in R^1 is optionally substituted by one or two methoxy, fluoro, chloro or trifluoromethyl groups, R^2 and R^3 are hydrogen, methyl, methoxy, fluorine, chlorine or bromine, R^4 and R^5 are hydrogen or methyl, R^6 is methyl or ethyl or linked to R^5 form a five or six membered lactam.
- 10 3. A compound selected from the group consisting of:
- N-2-(4-Butyloxy-benzylamino)-ethyl-acetamide;
 - N-2-[4-(4-triFluorobutyloxy)-benzylamino]-ethyl-acetamide;
 - N-2-(4-Pentyloxy-benzylamino)-ethyl-acetamide;
 - N-2-[4-(5-triFluoropentyloxy)-benzylamino]-ethyl-acetamide;
 - 15 N-2-(2-Benzyloxy-benzylamino)-ethyl-acetamide;
 - N-2-(3-Benzyloxy-benzylamino)-ethyl-acetamide;
 - N-2-(4-Benzyloxy-benzylamino)-ethyl-acetamide;
 - N-2-[4-(5-Phenyl-pentyloxy)-benzylamino]-ethyl-acetamide;
 - N-2-[4-(2-Phenethyl)-benzylamino]-ethyl-acetamide;
 - 20 N-{2-[2-(2-Fluoro-benzyloxy)-benzylamino]-ethyl}-acetamide;
 - N-{2-[3-(2-Fluoro-benzyloxy)-benzylamino]-ethyl}-acetamide;
 - N-{2-[4-(2-Fluoro-benzyloxy)-benzylamino]-ethyl}-acetamide;
 - N-{2-[4-(2-Fluoro-benzyloxy)-2-methoxy-benzylamino]-ethyl}-acetamide;
 - N-{2-[4-(2-Fluoro-benzyloxy)-2-methyl-benzylamino]-ethyl}-acetamide;
 - 25 N-{2-[4-(2-Fluoro-benzyloxy)-3-fluoro-benzylamino]-ethyl}-acetamide;
 - N-{2-[4-(2-Fluoro-benzyloxy)-3-chloro-benzylamino]-ethyl}-acetamide;
 - N-{2-[4-(2-Fluoro-benzyloxy)-3-methoxy-benzylamino]-ethyl}-acetamide;
 - N-{2-[4-(2-Fluoro-benzyloxy)-3-methyl-benzylamino]-ethyl}-acetamide;

N-{2-[4-(2-Fluoro-benzyloxy)-3,5-dimethoxy-benzylamino]-ethyl}-acetamide;

N-{2-[4-(2-Fluoro-benzyloxy)-3,5-dimethyl-benzylamino]-ethyl}-acetamide;

5 N-{2-[4-(2-Fluoro-benzyloxy)-3-bromo-5-methoxy-benzylamino]-ethyl}-acetamide;

N-3-(4-Pentyloxy-benzylamino)-propyl-acetamide;

N-2-[4-(5-trifluoropentyloxy)-benzylamino]-propyl-acetamide;

N-3-(4-Benzyloxy-benzylamino)-propyl-acetamide;

10 N-3-[4-(2-Phenethyl)-benzylamino]-propyl-acetamide;

N-3-[4-(5-Phenyl-pentyloxy)-benzylamino]-propyl-acetamide;

N-{3-[4-(2-Fluoro-benzyloxy)-2-methoxy-benzylamino]-propyl}-acetamide;

N-{3-[4-(2-Fluoro-benzyloxy)-2-methyl-benzylamino]-propyl}-acetamide;

15 N-{3-[4-(2-Fluoro-benzyloxy)-3-fluoro-benzylamino]-propyl}-acetamide;

N-{3-[4-(2-Fluoro-benzyloxy)-3-chloro-benzylamino]-propyl}-acetamide;

N-{3-[4-(2-Fluoro-benzyloxy)-3-methoxy-benzylamino]-propyl}-acetamide;

N-{3-[4-(2-Fluoro-benzyloxy)-3-methyl-benzylamino]-propyl}-acetamide;

20 N-{3-[4-(2-Fluoro-benzyloxy)-3,5-dimethoxy-benzylamino]-propyl}-acetamide;

N-{3-[4-(2-Fluoro-benzyloxy)-3,5-dimethyl-benzylamino]-propyl}-acetamide;

25 N-{3-[4-(2-Fluoro-benzyloxy)-3-bromo-5-methoxy-benzylamino]-propyl}-acetamide;

1-[2-(4-Butyloxy-benzylamino)-ethyl]-pyrrolidin-2-one;

1-{2-[4-(4-triFluorobutyloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;

1-[2-(4-Pentyloxy-benzylamino)-ethyl]-pyrrolidin-2-one;

- 1-{2-[4-(5-triFluoropentyloxy-benzylamino)-ethyl]}-pyrrolidin-2-one;
 1-[2-(2-Benzylloxy-benzylamino)-ethyl]-pyrrolidin-2-one;
 1-[2-(3-Benzylloxy-benzylamino)-ethyl]-pyrrolidin-2-one;
 1-[2-(4-Benzylloxy-benzylamino)-ethyl]-pyrrolidin-2-one;
 5 1-[2-(4-Benzylthio-benzylamino)-ethyl]-pyrrolidin-2-one;
 1-[2-(4-Benzylamino-benzylamino)-ethyl]-pyrrolidin-2-one;
 1-{2-[4-(5-Phenyl-pentyloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(2-Phenoxy-ethoxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(Naphthalen-1-ylmethoxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 10 1-{2-[2-(3-Fluorobenzylloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[3-(3-Fluorobenzylloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(3-Fluorobenzylloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(4-tert-Butyl-benzylloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(4-triFluoromethyl-benzylloxy)-benzylamino]-ethyl}-pyrrolidin-
 15 2-one;
 1-{2-[4-(2,6-Dichloro-benzylloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(3,5-Dimethoxy-benzylloxy)-benzylamino]-ethyl}-pyrrolidin-2-one;
 1-{2-[4-(2-Fluoro-benzylloxy)-2-methoxy-benzylamino]-ethyl}-
 pyrrolidin-2-one;
 20 1-{2-[4-(2-Fluoro-benzylloxy)-2-methyl-benzylamino]-ethyl}-
 pyrrolidin-2-one;
 1-{2-[4-(2-Fluoro-benzylloxy)-3-fluoro-benzylamino]-ethyl}-pyrrolidin-
 2-one;
 1-{2-[4-(2-Fluoro-benzylloxy)-3-methoxy-benzylamino]-ethyl}-
 25 pyrrolidin-2-one;
 1-{2-[4-(2-Fluoro-benzylloxy)-3-methyl-benzylamino]-ethyl}-
 pyrrolidin-2-one;
 1-{2-[4-(2-Fluoro-benzylloxy)-3-chloro-benzylamino]-ethyl}-pyrrolidin-

2-one;

1-{2-[4-(2-Fluoro-benzyloxy)-3,5-dimethoxy-benzylamino]-ethyl}-
pyrrolidin-2-one;

1-{2-[4-(2-Fluoro-benzyloxy)-3,5-dimethyl-benzylamino]-ethyl}-
5 pyrrolidin-2-one;

1-{2-[4-(2-fluoro-benzyloxy)-3-bromo-5-methoxy-benzylamino]-
ethyl}-pyrrolidin-2-one;

1-[3-(4-Pentyloxy-benzylamino)-propyl]-pyrrolidin-2-one;

1-[3-(2-Benzyloxy-benzylamino)-propyl]-pyrrolidin-2-one;

10 1-[3-(3-Benzyloxy-benzylamino)-propyl]-pyrrolidin-2-one;

1-[3-(4-Benzyloxy-benzylamino)-propyl]-pyrrolidin-2-one;

1-{3-[4-(5-Phenyl-pentyloxy)-benzylamino]-propyl}-pyrrolidin-2-one;

1-{3-[4-(2-Phenoxy-ethoxy)-benzylamino]-propyl}-pyrrolidin-2-one;

1-{3-[4-(Naphthalen-1-ylmethoxy)-benzylamino]-propyl}-pyrrolidin-2-one;

15 1-{3-[4-(4-tert-Butyl-benzyloxy)-benzylamino]-propyl}-pyrrolidin-2-one;

1-{3-[4-(4-triFluoromethyl-benzyloxy)-benzylamino]-propyl}-
pyrrolidin-2-one;

1-{3-[4-(2,6-Dichloro-benzyloxy)-benzylamino]-propyl}-pyrrolidin-2-one;

1-{3-[4-(3,5-Dimethoxy-benzyloxy)-benzylamino]-propyl}-pyrrolidin-

20 2-one;

1-{3-[4-(2-Fluoro-benzyloxy)-2-methoxy-benzylamino]-propyl}-
pyrrolidin-2-one;

1-{3-[4-(2-Fluoro-benzyloxy)-2-methyl-benzylamino]-propyl}-
pyrrolidin-2-one;

25 1-{3-[4-(2-Fluoro-benzyloxy)-3-fluoro-benzylamino]-propyl}-
pyrrolidin-2-one;

1-{3-[4-(2-Fluoro-benzyloxy)-3-methoxy-benzylamino]-propyl}-
pyrrolidin-2-one;

1-{3-[4-(2-Fluoro-benzyloxy)-3-methyl-benzylamino]-propyl}-
pyrrolidin-2-one;

1-{3-[4-(2-Fluoro-benzyloxy)-3-chloro-benzylamino]-propyl}-
pyrrolidin-2-one;

5 1-{3-[4-(2-Fluoro-benzyloxy)-3,5-dimethoxy-benzylamino]-propyl}-
pyrrolidin-2-one;

1-{3-[4-(2-Fluoro-benzyloxy)-3,5-dimethyl-benzylamino]-propyl}-
pyrrolidin-2-one;

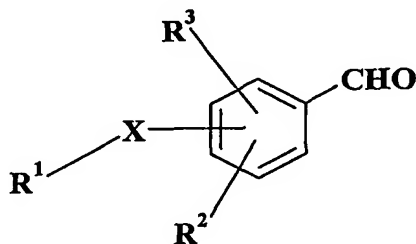
10 1-{3-[4-(2-fluoro-benzyloxy)-3-bromo-5-methoxy-benzylamino]-
propyl}-pyrrolidin-2-one;

or pharmaceutically acceptable salts thereof.

4. A process for the preparation of a compound of formula I, as defined in
claim 1, or a pharmaceutically acceptable salt thereof, the process comprising:

a) reaction of compounds of formula II

15

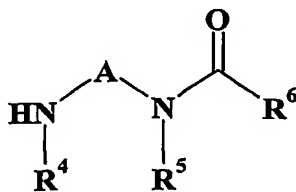


II

wherein R^1 , R^2 , R^3 and X are as defined above

with compounds of formula III, in the presence of a reducing agent

20

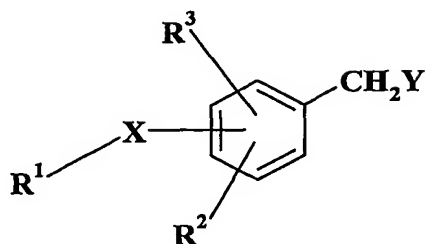


III

wherein R^4 , R^5 , R^6 and A are as defined previously thus obtaining a

compound of formula I; or

b) reaction of compounds of formula IV

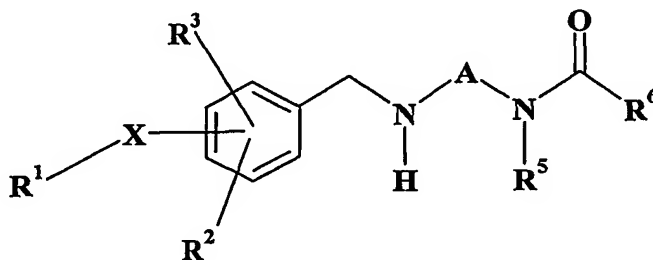


IV

wherein R¹, R², R³ and X are as defined above and Y is a halogen atom or a O-EWG group, where the EWG means an electron withdrawing group, like e.g. mesyl, tosyl or trifluoroacetyl groups, able to transform the oxygen which they are linked to, in a good leaving group

with compounds of formula III thus obtaining a compound of formula I; or

c) reacting of a compound of formula Ia



Ia

wherein R¹, R², R³, R⁵ and R⁶, X and A are as defined above, with compounds of formula V or VI



V



VI

wherein Y is as defined above; R⁴ is a C₁-C₆ alkyl and R⁸ is hydrogen or C₁-C₅ alkyl, thus obtaining a compound of the invention in which R⁴ is C₁-C₆ alkyl; and, if desired, converting a compound of the invention into

another compound of the invention and/or, if desired, converting a compound of the invention into a pharmaceutically acceptable salt and/or, if desired, converting a salt into a free compound and/or, if desired, separating a mixture of isomers of compounds of the invention into a single isomer.

- 5 5. A pharmaceutical composition containing a compound of formula I, as defined in claim 1, or a pharmaceutically acceptable salt thereof in admixture with a suitable carrier and/or diluent and optionally to other therapeutic agents.
6. A compound of formula I, as defined in claim 1, or a pharmaceutically acceptable salt thereof, for use as an active therapeutic substance.
- 10 7. The use of a compound of formula I, as defined in claim 1, or a pharmaceutically acceptable salt thereof, for the preparation of a medicament having sodium and/or calcium channel modulating activity.